

original
claims

CLAIMS

1. An isolated nucleic acid comprising a nucleotide sequence encoding an *E. cloacae* polypeptide selected from the group consisting of SEQ ID NO: 5663 -
5 SEQ ID NO: 11324.

2. A recombinant expression vector comprising the nucleic acid of claim 1 operably linked to a transcription regulatory element.

10 3. A cell comprising a recombinant expression vector of claim 2.

4. A method for producing an *E. cloacae* polypeptide comprising culturing a cell of claim 3 under conditions that permit expression of the polypeptide.

15 5. An isolated nucleic acid comprising a nucleotide sequence encoding an *E. cloacae* polypeptide or a fragment thereof, said nucleic acid selected from the group consisting of SEQ ID NO: 1 - SEQ ID NO: 5662.

20 6. A recombinant expression vector comprising the nucleic acid of claim 5 operably linked to a transcription regulatory element.

7. A cell comprising a recombinant expression vector of claim 6.

25 8. A method for producing an *E. cloacae* polypeptide comprising culturing a cell of claim 7 under conditions that permit expression of the polypeptide.

9. A probe comprising a nucleotide sequence consisting of at least 8 nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 - SEQ ID NO: 5662.

Sub A3 } 10. An isolated nucleic acid comprising a nucleotide sequence of at least 8 nucleotides in length, wherein the sequence is hybridizable to a nucleic acid having a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 - SEQ ID NO: 5662.

Sub A3 } 11. A vaccine composition for prevention or treatment of an *E. cloacae* infection comprising an effective amount of a nucleic acid of claim 5 and a pharmaceutically acceptable carrier.

12. A vaccine composition of claim 11, further comprising an adjuvant.

15 } 13. A vaccine composition of claim 11, further comprising one or more additional active ingredients.

20 14. A method of treating a subject for *E. cloacae* infection comprising administering to a subject a vaccine composition of claim 11, such that treatment of *E. cloacae* infection occurs.

15. A method of claim 14, wherein the treatment is a prophylactic treatment.

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16. A method of claim 14, wherein the treatment is a therapeutic treatment.

17. A recombinant or substantially pure preparation of an *E. cloacae* polypeptide or a fragment thereof, wherein said polypeptide is selected from the group consisting of SEQ ID NO: 5663 - SEQ ID NO: 11324.

5 18. A vaccine composition for prevention or treatment of an *E. cloacae* infection comprising an effective amount of an *E. cloacae* polypeptide of claim 17 and a pharmaceutically acceptable carrier.

10 19. A vaccine composition of claim 18, further comprising an adjuvant.

20. A vaccine composition of claim 18, further comprising one or more additional active ingredients.

15 21. A method of treating a subject for *E. cloacae* infection comprising administering to a subject a vaccine composition of claim 18, such that treatment of *E. cloacae* infection occurs.

20 22. A method of claim 21, wherein the treatment is a prophylactic treatment.

23. A method of claim 21, wherein the treatment is a therapeutic treatment.

24. A method for detecting the presence of a *Enterobacter* nucleic acid in a sample comprising:

(a) contacting a sample with a nucleic acid of claim 5 under conditions in which a hybrid can form between the probe and a *Enterobacter* nucleic acid in the sample; and

(b) detecting the hybrid formed in step (a), wherein detection of a hybrid indicates the presence of a *Enterobacter* nucleic acid in the sample.

25. A computer readable medium having recorded thereon the nucleotide sequences depicted in SEQ ID NO: 1 - SEQ ID NO: 5662 or fragments thereof.

26. A computer based system for identifying fragments of the *Enterobacter* genome of commercial importance comprising the following elements;

a) a data storage means comprising the nucleotide sequences SEQ ID NO: 1 - SEQ ID NO: 5662 or fragments thereof,

b) a search means for comparing a target sequence to the nucleotide sequences of the data storage means of step (a) to identify homologous sequences, and;

c) a retrieval means for obtaining said homologous sequences(s) of step (b).

27. A method of identifying commercially important nucleic acid fragments of the *Enterobacter* genome comprising the step of comparing a database comprising the nucleotide sequences SEQ ID NO: 1 - SEQ ID NO: 5662 or fragments thereof with a target sequence to obtain a nucleic acid molecule comprised of a complementary nucleotide sequence to said target sequence, wherein said target sequence is not randomly selected.

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0	0	1	4	9	16	25	36	49	64	81	100	121	144	169	196	225	256	289	324	361	400	441	484	529	576	625	676	729	784	841	900	961	1024	1089	1156	1225	1296	1369	1444	1521	1600	1681	1764	1849	1936	2025	2116	2209	2304	2401	2500	2601	2704	2809	2916	3025	3136	3249	3364	3481	3600	3721	3844	3969	4096	4225	4356	4489	4624	4761	4900	5041	5184	5329	5476	5625	5776	5929	6084	6241	6400	6561	6724	6889	7056	7225	7396	7569	7744	7921	8100	8281	8464	8649	8836	9025	9216	9409	9604	9801	10000

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